



```
RRRRRRRR      EEEEEEEEEE      QQQQQQ      UU      UU      IIIIII      RRRRRRRR
RRRRRRRR      EEEEEEEEEE      QQQQQQ      UU      UU      IIIIII      RRRRRRRR
RR          RR  EE          QQ          QQ      UU      UU      II         RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR
RRRRRRRR      EEEEEEEE      QQ          QQ      UU      UU      II         RRRRRRRR
RRRRRRRR      EEEEEEEE      QQ          QQ      UU      UU      II         RRRRRRRR
RR    RR       EE          QQ          QQ      UU      UU      II         RR    RR
RR    RR       EE          QQ          QQ      UU      UU      II         RR    RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR          RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR          RR
RR          RR  EE          QQ          QQ      UU      UU      II         RR          RR
RR          RR  EEEEEEEEEE      QQQQ      QQ      UUUUUUUUUU      IIIIII      RR          RR
RR          RR  EEEEEEEEEE      QQQQ      QQ      UUUUUUUUUU      IIIIII      RR          RR
```

[illegible]



```
1 0001 0 %TITLE 'Process the .REQUIRE directive'
2 0002 0 MODULE REQUIR (
3 0003 0 IDENT = 'V04-000'
4 P 0004 0 %BLISS32[
5 P 0005 0 ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE, NONEXTERNAL=LONG_RELATIVE)
6 0006 0 ]
7 0007 0 ) =
8 0008 1 BEGIN
9 0009 1
10 0010 1 *****
11 0011 1 *
12 0012 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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28 0028 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
29 0029 1 *
30 0030 1 *
31 0031 1 *****
32 0032 1
33 0033 1 ++
34 0034 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
35 0035 1
36 0036 1 ABSTRACT: Processes the .REQUIRE command
37 0037 1
38 0038 1
39 0039 1 ENVIRONMENT: Transportable
40 0040 1
41 0041 1 AUTHOR: R.W.Friday CREATION DATE: July, 1978
42 0042 1
```

REQUIR  
V04-000

Process the .REQUIRE directive  
Revision History

M 14  
16-Sep-1984 01:32:10  
14-Sep-1984 13:07:51

VAX-11 Bliss-32 V4.0-742  
[RUNOFF.SRC]REQUIR.BLI;1

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|   |    |      |   |                           |                                                           |
|---|----|------|---|---------------------------|-----------------------------------------------------------|
| : | 44 | 0043 | 1 | %SBTTL 'Revision History' |                                                           |
| : | 45 | 0044 | 1 |                           |                                                           |
| : | 46 | 0045 | 1 | MODIFIED BY:              |                                                           |
| : | 47 | 0046 | 1 |                           |                                                           |
| : | 48 | 0047 | 1 | 007                       | KAD00007 Keith Dawson 07-Mar-1983                         |
| : | 49 | 0048 | 1 |                           | Global edit of all modules. Updated module names, idents, |
| : | 50 | 0049 | 1 |                           | copyright dates. Changed require files to BLISS library.  |
| : | 51 | 0050 | 1 |                           |                                                           |
| : | 52 | 0051 | 1 | --                        |                                                           |



```
54 0052 1 %SBTTL 'Module Level Declarations'
55 0053 1
56 0054 1 TABLE OF CONTENTS:
57 0055 1
58 0056 1
59 0057 1 INCLUDE FILES:
60 0058 1
61 0059 1
62 0060 1 LIBRARY 'NXPORT:XPORT'; ! XPORT Library
63 0061 1 REQUIRE 'REQ:RNODEF'; ! RUNOFF variant definitions
64 0192 1
65 U 0193 1 %IF DSRPLUS %THEN
66 U 0194 1 LIBRARY 'REQ:DPLLIB'; ! DSRPLUS BLISS Library
67 0195 1 %ELSE
68 0196 1 LIBRARY 'REQ:DSRLIB'; ! DSR BLISS Library
69 0197 1 %FI
70 0198 1
71 0199 1
72 0200 1 MACROS:
73 0201 1
74 0202 1 MACRO
75 M 0203 1     erm_t (rnfcodes, str_descr) =
76 M 0204 1     BEGIN
77 M 0205 1     BIND
78 M 0206 1         temp = str_descr : $STR_DESCRIPTOR ();
79 M 0207 1         erme (rnfcodes, temp [STR$A_POINTER], temp [STR$H_LENGTH], .semcod)
80 0208 1     END %;
81 0209 1
82 0210 1 EQUATED SYMBOLS:
83 0211 1
84 0212 1
85 0213 1 EXTERNAL LITERAL
86 0214 1     rintex : UNSIGNED (8);
87 0215 1
88 0216 1
89 0217 1 OWN STORAGE:
90 0218 1
91 0219 1
92 0220 1 EXTERNAL REFERENCES:
93 0221 1
94 0222 1
95 0223 1 EXTERNAL
96 0224 1     flgt : flag_table,
97 0225 1     fs01 : fixed_string, ! Temporary storage for file-spec
98 0226 1     ira : fixed_string,
99 0227 1     khar,
100 0228 1     ffname : $STR_DESCRIPTOR (CLASS = DYNAMIC), ! Failing file's name
101 0229 1     semcod;
102 0230 1
103 0231 1 EXTERNAL LITERAL ! Error messages
104 0232 1     rnfcodes : W - Can't open required file "%S"
105 0233 1     rnflines : I - on output page %P; on input line %C of page %I of file "%F"
106 0234 1     rnfmfs : W - Missing or improperly delimited file spec: "%S"
107 0235 1     rnfnstd : W - Files nested too deep: "%S"
108 0236 1     rnfntr : W - No text allowed after .REQUIRE command: "%S"
109 0237 1
110 0238 1 EXTERNAL ROUTINE
```



REQUIR  
V04-000

Process the .REQUIRE directive  
Module Level Declarations

B 15  
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[RUNOFF.SRC]REQUIR.BLI;1

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|   |     |      |   |         |
|---|-----|------|---|---------|
| : | 111 | 0239 | 1 | arec,   |
| : | 112 | 0240 | 1 | clh,    |
| : | 113 | 0241 | 1 | endcmt, |
| : | 114 | 0242 | 1 | erm,    |
| : | 115 | 0243 | 1 | erma,   |
| : | 116 | 0244 | 1 | erme,   |
| : | 117 | 0245 | 1 | getqs,  |
| : | 118 | 0246 | 1 | rskips; |
| : | 119 | 0247 | 1 |         |



```
121 0248 1 %SBTTL 'REQ -- main routine body'
122 0249 1 GLOBAL ROUTINE req (handler_code) : NOVALUE =
123 0250 1
124 0251 1 ++
125 0252 1 FUNCTIONAL DESCRIPTION:
126 0253 1
127 0254 1 This routine causes RUNOFF to take its input from the file specified as
128 0255 1 the parameter to the .REQUIRE command. Spaces, tabs, and comments
129 0256 1 following the file-spec are ignored; other characters are not allowed.
130 0257 1
131 0258 1 FORMAL PARAMETERS:
132 0259 1
133 0260 1 Handler_code is passed by DOCM for conformity with other routines.
134 0261 1 It is never used.
135 0262 1
136 0263 1 IMPLICIT INPUTS: None
137 0264 1
138 0265 1 IMPLICIT OUTPUTS:
139 0266 1
140 0267 1 FS01 contains the file-spec of the file ".REQUIRED". When CLH gets
141 0268 1 called with the operation CLH_OPEN_REQ it expects to find the
142 0269 1 file-spec of the file to be opened in FS01.
143 0270 1
144 0271 1 ROUTINE VALUE:
145 0272 1 COMPLETION CODES: None
146 0273 1
147 0274 1 SIDE EFFECTS: None
148 0275 1
149 0276 1 --
150 0277 1
151 0278 2 BEGIN
152 0279 2
153 0280 2 LOCAL
154 0281 2 result;
155 0282 2
156 0283 2 rskips (ira); !Skip spaces and tabs before file-spec.
157 0284 2 result = getqs (fs01); !Get file-spec into FS01
158 0285 2
159 0286 2 IF .result EQL getqs_normal
160 0287 2 THEN
161 0288 2 !Found a file-spec.
162 0289 3 BEGIN
163 0290 3 !Skip trailing spaces, tabs, and comments before opening file.
164 0291 3 !The entire remainder of the record is skipped.
165 0292 3 rskips (ira); !Skip trailing spaces and tabs
166 0293 3
167 0294 3 IF .flgt [com_flag, flag_enabled] !Skip single trailing comment
168 0295 4 AND (.khar-EQL .flgt [com_flag, flag_character])
169 0296 4 THEN
170 0297 3 endcmt ();
171 0298 3
172 0299 3 WHILE 1 DO
173 0300 4 BEGIN
174 0301 4 !Skip spaces and tabs
175 0302 4 result = arec ();
176 0303 4
177 0304 4 IF .result EQL end_of_string
```



```
178 0305 4 THEN
179 0306 4 EXITLOOP
180 0307 4 ELSE
181 0308 4
182 0309 4 IF .result EQL cf_comment
183 0310 4 THEN
184 0311 4 !Skip a comment.
185 0312 4 endcmt ()
186 0313 4 ELSE
187 0314 4 !Something other than spaces, tabs, and comments
188 0315 4 !after the file-spec.
189 0316 4 !Note: comments of the form .COMMENT are illegal
190 0317 4 here. If they are to be allowed, this is
191 0318 4 the place to put the code to check for them.
192 0319 5 BEGIN
193 0320 5 erma (rnftar, true);
194 0321 5 RETURN
195 0322 5 END
196 0323 3 END;
197 0324 3
198 0325 3 result = clh (clh_push); ! Stack current input file
199 0326 3
200 0327 3 IF .result NEQ clh_normal
201 0328 3 THEN
202 0329 3 !No room to stack current input file.
203 0330 4 BEGIN
204 0331 4 erma (rnfnfd, false);
205 0332 4 RETURN;
206 0333 4 END
207 0334 3 ELSE
208 0335 3
209 0336 3 ! Have ascertained that there is enough room for the control blocks
210 0337 3 ! needed for the processing, so try to open the file.
211 0338 3 BEGIN
212 0339 4
213 0340 4 ! CLH expects to find the file-spec in FS01.
214 0341 4
215 0342 4 result = clh (clh_open_req);
216 0343 4
217 0344 4 IF .result EQL clh_normal ! If CLH returns normal,
218 0345 4 THEN ! then we're done here.
219 0346 4 RETURN
220 0347 4 ! And away we go!!!! Popping the file stack is done
221 0348 4 ! automatically by CLH, when it gets an end of file when
222 0349 4 ! it gets called to read the next input record.
223 0350 4
224 0351 4 ELSE
225 0352 5 BEGIN ! File could not be opened, damnit!
226 0353 5
227 0354 5 erm_t ( rnfcor, ffname); ! Can't open REQUIRE file
228 0355 5 clh (clh_pop); ! Continue with previous file.
229 0356 5 erm (rnftoc, 0, 0); ! Identify that files name
230 0357 5
231 0358 5 RETURN;
232 0359 4 END;
233 0360 3 END;
234 0361 3 END
```



REQUIR  
V04-000

Process the .REQUIRE directive  
REQ -- main routine body

E 15  
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[RUNOFF.SRC]REQUIR.BLI;1

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```
: 235      0362 2  ELSE
: 236      0363 2  !Missing file-spec, or one not properly delimited.
: 237      0364 2  BEGIN
: 238      0365 3  erma (rnfmfs, true);
: 239      0366 2  END;
: 240      0367 1  END;
```

!End of REQ

.TITLE REQUIR Process the .REQUIRE directive  
.IDENT \V04-000\

.EXTRN RINTES, FLGT, FS01  
.EXTRN IRA, KHAR, FFNAME  
.EXTRN SEMCOD, RNFCOR, RNFLOC  
.EXTRN RNFMFS, RNFNTD, RNFTAR  
.EXTRN AREC, CLH, ENDCMT  
.EXTRN ERM, ERMA, ERME  
.EXTRN GETQS, RSKIPS

.PSECT \$CODE\$,NOWRT,2

|           |                 |               |                              |        |
|-----------|-----------------|---------------|------------------------------|--------|
|           |                 | 003C 00000    | .ENTRY REQ, Save R2,R3,R4,R5 | : 0249 |
|           | 55 00000000G    | EF 9E 00002   | MOVAB IRA, R5                |        |
|           | 54 00000000G    | EF 9E 00009   | MOVAB RSKIPS, R4             |        |
|           | 53 00000000G    | EF 9E 00010   | MOVAB CLH, R3                |        |
|           |                 | 55 DD 00017   | PUSHL R5                     | : 0283 |
|           | 64 00000000G    | 01 FB 00019   | CALLS #1, RSKIPS             |        |
|           |                 | EF 9F 0001C   | PUSHAB FS01                  | : 0284 |
| 00000000G | EF 01 FB 00022  |               | CALLS #1, GETQS              |        |
|           | 52 50 D0 00029  |               | MOVL R0, RESULT              |        |
|           |                 | 03 13 0002C   | BEQL 1\$                     | : 0286 |
|           |                 | 0097 31 0002E | BRW 6\$                      |        |
|           |                 | 55 DD 00031   | PUSHL R5                     | : 0292 |
|           | 64 00000000G    | 01 FB 00033   | CALLS #1, RSKIPS             |        |
|           | 14 00000000G    | EF E9 00036   | BLBC FLGT+56, 3\$            | : 0294 |
| 00000000G | EF 00000000G    | EF D1 0003D   | CMPL KHAR, FLGT+128          | : 0295 |
|           |                 | 07 12 00048   | BNEQ 3\$                     |        |
| 00000000G | EF 00  FB 0004A |               | CALLS #0, ENDCMT             | : 0297 |
| 00000000G | EF 00  FB 00051 |               | CALLS #0, AREC               | : 0302 |
|           | 52 50 D0 00058  |               | MOVL R0, RESULT              |        |
|           | 01 52 D1 0005B  |               | CMPL RESULT, #1              | : 0304 |
|           |                 | 0F 13 0005E   | BEQL 4\$                     |        |
|           | 04 52 D1 00060  |               | CMPL RESULT, #4              | : 0309 |
|           |                 | E5 13 00063   | BEQL 2\$                     |        |
|           |                 | 01 DD 00065   | PUSHL #1                     | : 0320 |
|           | 00000000G       | 8F DD 00067   | PUSHL #RNFTAR                |        |
|           |                 | 61 11 0006D   | BRB 7\$                      |        |
|           |                 | 07 DD 0006F   | PUSHL #7                     | : 0325 |
|           | 63 01 FB 00071  |               | CALLS #1, CLH                |        |
|           | 52 50 D0 00074  |               | MOVL R0, RESULT              |        |
|           | 01 52 D1 00077  |               | CMPL RESULT, #1              | : 0327 |
|           |                 | 0A 13 0007A   | BEQL 5\$                     |        |
|           |                 | 7E D4 0007C   | CLRL -(SP)                   | : 0331 |
|           | 00000000G       | 8F DD 0007E   | PUSHL #RNFTD                 |        |
|           |                 | 4A 11 00084   | BRB 7\$                      |        |
|           |                 | 09 DD 00086   | PUSHL #9                     | : 0343 |
|           | 63 01 FB 00088  |               | CALLS #1, CLH                |        |

REQUIR  
V04-000

Process the .REQUIRE directive  
REQ -- main routine body

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|           |           |    |       |       |        |             |
|-----------|-----------|----|-------|-------|--------|-------------|
| 52        |           | 50 | D0    | 0008B | MOVL   | R0, RESULT  |
| 01        |           | 52 | D1    | 0008E | CMPL   | RESULT, #1  |
|           |           | 44 | 13    | 00091 | BEQL   | 8\$         |
|           | 00000000G | EF | DD    | 00093 | PUSHL  | SEMCOD      |
| 7E        | 00000000G | EF | 3C    | 00099 | MOVZWL | TEMP, -(SP) |
|           | 00000000G | EF | DD    | 000A0 | PUSHL  | TEMP+4      |
|           | 00000000G | 8F | DD    | 000A6 | PUSHL  | #RNF COR    |
| 00000000G | EF        | 04 | FB    | 000AC | CALLS  | #4, ERME    |
|           |           | 08 | DD    | 000B3 | PUSHL  | #8          |
| 63        |           | 01 | FB    | 000B5 | CALLS  | #1, CLH     |
|           |           | 7E | 7C    | 000B8 | CLRQ   | -(SP)       |
|           | 00000000G | 8F | DD    | 000BA | PUSHL  | #RNFLOC     |
| 00000000G | EF        | 03 | FB    | 000C0 | CALLS  | #3, ERM     |
|           |           | 04 | 000C7 | RET   |        |             |
|           | 00000000G | 01 | DD    | 000C8 | PUSHL  | #1          |
|           |           | 8F | DD    | 000CA | PUSHL  | #RNF MFS    |
| 00000000G | EF        | 02 | FB    | 000D0 | CALLS  | #2, ERMA    |
|           |           | 04 | 000D7 | 8\$:  | RET    |             |

: 0345  
: 0354  
: 0355  
: 0356  
: 0339  
: 0365  
: 0367

; Routine Size: 216 bytes, Routine Base: \$CODE\$ + 0000

: 241 0368 1  
: 242 0369 1 END  
: 243 0370 0 ELUDOM

!End of module

#### PSECT SUMMARY

| Name     | Bytes | Attributes                                                   |
|----------|-------|--------------------------------------------------------------|
| \$CODE\$ | 216   | NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2) |

#### Library Statistics

| File                                  | Total | Symbols Loaded | Percent | Pages Mapped | Processing Time |
|---------------------------------------|-------|----------------|---------|--------------|-----------------|
| \$255\$DUA28:[SYSLIB]XPORT.L32;1      | 590   | 11             | 1       | 252          | 00:00.1         |
| \$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1 | 1248  | 14             | 1       | 86           | 00:00.2         |

#### COMMAND QUALIFIERS

; BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/LIS=LIS\$:REQUIR/OBJ=OBJ\$:REQUIR MSRC\$:REQUIR/UPDATE=(ENHS\$:REQUIR)



REQUIR  
V04-000

Process the .REQUIRE directive  
REQ -- main routine body

G 15  
16-Sep-1984 01:32:10  
14-Sep-1984 13:07:51

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[RUNOFF.SRC]REQUIR.BLI;1

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: 244 0371 0  
: Size: 216 code + 0 data bytes  
: Run Time: 00:05.6  
: Elapsed Time: 00:16.8  
: Lines/CPU Min: 3960  
: Lexemes/CPU-Min: 23017  
: Memory Used: 74 pages  
: Compilation Complete



0347 AH-BT13A-SE  
VAX/VMS V4.0

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